

REMARKS

The rejections under 35 U.S.C. § 103(a) as unpatentable of:

Claims 1-5 and 7-11 over Applicants' disclosure at "page 8, line 25 to page 9, line 7" of the specification in view of U.S. 4,595,394 (Okamoto et al), and

Claim 6 over Applicants' disclosure in view of Okamoto et al, and further in view of U.S. 5,435,954 (Wold),

are respectfully traversed.

Regarding Applicants' disclosure relied on by the Examiner, Applicants have acknowledged the known affinity of threne dyes to cellulosic fibers and their excellent fastness properties. But this is the extent of any admission. The remainder of the disclosure at page 8, line 25 to page 9, line 7 is part of Applicants' invention.

Okamoto et al adds nothing to the above acknowledgement. In that regard, Okamoto et al discloses many other types of dyes for dyeing cellulosic materials -- direct dyes, sulfide dyes, naphthol dyes, reactive dyes, basic dyes, and acid dyes (column 3, lines 55-57) -- and makes no distinction among different types of dyes, or among threne dyes *per se*.

Wold has been relied on for a disclosure of plastics such as polyethylene, polypropylene, and polyvinyl chloride in articles comprising reinforced composite materials including primarily wood or cellulosic fibers and a plastic.

The Yamaguchi Declaration filed March 14, 2005 (first Yamaguchi Declaration) demonstrates that threne dyes provide heat discoloration resistance and weatherability that is superior to a particular direct dye and a particular reactive dye, both of which are of types of dyes disclosed by Okamoto et al. Such superiority could not have been predicted by the applied prior art.

In the Final Office Action, the Examiner finds that the first Yamaguchi Declaration "presents valuable data as to how threne dyes provide superior heat discoloration resistance

and weatherability,” but finds that Okamoto et al “does teach this characteristic of threne dyes,” relying on the disclosure therein at column 3, lines 63-64. In reply, the only property Okamoto et al discloses therein with regard to threne dyes is excellent color or dyeing fastness. Nevertheless, even if the properties demonstrated in the first Yamaguchi Declaration were the same as, or overlapped, color or dye fastness, Okamoto et al, as discussed above, makes no distinction among threne dyes *per se*.

The present claims now limit the threne dye to particular such dyes, i.e., at least one of C.I. Vat Red 10, C.I. Vat Blue 14, C.I. Vat Brown 1, C.I. Vat Orange 2, C.I. Vat Green 1, C.I. Vat Yellow 22, C.I. Vat Violet 1, C.I. Vat Yellow 48 and C.I. Vat Black.

The newly-submitted second Yamaguchi Declaration demonstrates that there is a difference among threne dyes *per se*. The second Yamaguchi Declaration measures the ability of various threne dyes of compensating insufficient heat discoloration resistance of cellulosic fibers themselves, and demonstrates that such capability varies depending on the particular threne dye used. Thus, contrary to the finding by the Examiner, threne dyes are **not** all equivalent in capability.

Nor is it significant that Applicants have not exemplified all of the threne dyes within the terms of the broadest claims herein, because the Examiner has not made out a *prima facie* case of obviousness. Indeed, the present invention is drawn specifically to colored short cellulosic fibers, not cellulose fibers *per se*.

As disclosed in the specification, molded products of a variety of resin compositions with colored short fibers have been marketed, but except for some applications, have surfaces poor in durability such as heat resistance and weatherability. Colored short cellulosic fibers are useful for resin compositions, because such fibers undergo neither melting nor softening and shrinkage, even when heated. However, they are also accompanied by drawbacks, such as being poor in heat discoloration resistance, so that the fibers themselves undergo yellowing

or browning at a molding temperature as low as 220°C or so. Cellulosic short fibers dyed with general-purpose dyes are not sufficient in both heat discoloration resistance and weatherability. Resin compositions which contain colored short cellulosic fibers mass-colored with a pigment are themselves problematical for reasons described.

Thus, since the applied prior art discloses nothing with regard to colored short cellulosic fibers, and their particular problems when combined with a matrix resin, no *prima facie* case of obviousness has been made out.

The Examiner also appears to ignore the fact that the present invention is not simply dyed cellulose fibers but, as recited in Claim 1, a resin composition comprising a **matrix resin** and **short** cellulose fibers dyed with at least one threne dye, as above specified. It is only with the present disclosure as a guide that one skilled in the art would choose threne dyes, out of all of the other known dyes for dyeing cellulosic fibers, and use them in a resin composition comprising a matrix resin and short cellulosic fibers.

Regarding Applicants' argument of separately patentability of Claim 8, based on the comparative data in the specification which shows that when the concentration of the threne dye is from 7 to 15 wt.% based on the short cellulosic fibers, various improved properties result, and that the prior art does not appreciate that the amount of threne dye based on the short cellulosic fibers, is a result-effective variable, the Examiner finds, in the Final Office Action, that Claim 8 is unpatentable, "because it is obvious to vary such amount as required to produce the final product with desired appearance."

In reply, the Examiner has ignored the argument that the prior art does not appreciate that the amount of threne dye based on short cellulosic fibers is a result-effective variable.

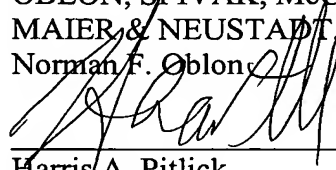
For all the above reasons, it is respectfully requested that the rejections over prior art be withdrawn.

Application No. 10/067,944  
Reply to Final Office Action dated June 24, 2005

All of the presently-pending claims in this application are now believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Respectfully submitted,

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